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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

STEVENS, ROBERT

ART UNIT

PAPER NUMBER

2176

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/843,198

Applicant(s)

HIND ET AL.

Examiner

Robert M Stevens

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communications: **Application No. 09/843,198** amendment filed 1/7/2005 to the original application filed 4/26/2001 by Hind et al. entitled "Conversion of Documents Between XML and Processor Efficient mXML in Content Based Routing Networks".
2. The Office acknowledges Information Disclosure Statement filed 2/22/2005.
3. The Office withdraws objections raised in the First Action on the Merits (FAOM) concerning the specification in light of the amendment.
4. The Office withdraws claims rejections under 35 USC 112 2nd paragraph raised in the FAOM, in light of the amendment.
5. However, the Office has set forth subsequent rejections under 35 USC 112 1st and 2nd paragraphs in this communication as necessitated by amendment.
6. The FAOM rejections of claims 1-4, 6-12, 14-16, 18-21, 24 and 27-31 under 103(a) as being unpatentable over Abjanic, have been withdrawn/modified as necessitated by amendment.

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7. The FAOM rejections of claims 5, 13, 17, 22-23 and 25-26 under 103(a) as being unpatentable over Abjanic in view of Harold and LaFore, have been withdrawn/modified as necessitated by amendment.

8. Claims 1-33 are pending. Claims 1, 14, 21, 24 and 27 are independent. Claims 8 and 10 have been cancelled. Claims 32-33 are new. Claims 1-7, 9 and 11-33 stand rejected as set forth below.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. **Claims 14-20 and 33 are rejected under 35 U.S.C. 112, first paragraph**, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding independent claim 14 and claim 33, no details were provided as to how one skilled in the art would implement “excluding tags that include human language words”.

Claims 15-20 are dependent upon claim 14, and therefore likewise rejected.

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. **Claims 1-33 are rejected under 35 U.S.C. 112, second paragraph**, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding independent claims 1, 21, 24 and 27, the recited language “being capable of” and “more efficiently than” renders the claim scope ambiguous. Using the phrase “being capable of” makes it unclear whether or not it actually performs what it’s capable of doing. The phrase “more efficiently than” is an unquantifiable relative term/phrase, which would not be understood by one of ordinary skill in the art in light of the specification, and thus renders the claim indefinite.

Claims 2-12, 22-23, 25-26, 28-31 and 32-33 are dependent upon the above-referenced independent claims, as appropriate, and therefore likewise rejected.

Further regarding independent claim 32, there is an inconsistency between the claim and the specification which imparts an unreasonable degree of uncertainty, thus rendering the claim indefinite. The claim indicates that “an array notation” formatting is used, yet the format depicted in Fig. 4C is not of an array representation

that one of ordinary skill in the art would recognize. Additionally, the term/phrase "array notation" is not defined in the specification, but appears to represent something other than a standard "array". For the purpose of further examination, the Office will treat the "array notation" as arrays that are well known in the art.

Regarding independent claim 14 and claim 33, there is an inconsistency between the claim and the specification which imparts an unreasonable degree of uncertainty, thus rendering the claim indefinite. The claim indicates that "human language words" are excluded from mXML documents, yet Fig. 4C contains many words such as element, level, name, etc. Additionally, the term/phrase "human language words" is not only awkward, but vague and ambiguous.

Claims 15-20 are dependent upon claim 14, and therefore likewise rejected.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. **Claims 1-4, 6-7, 9, 11-12, 14-16, 18-21, 24, 27-31 and 33 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Abjanic et al (US Patent Application Publication No. 2003/0069975 filed Dec. 22, 2000 and relying upon CIP application filed

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5/8/00 [09/566,800], which in turn relies upon CIP filed 4/13/00 [09/549,041], and further relying upon CIP application filed 5/1/00 [09/562,104], said Publication hereafter referred to as "Abjanic").

Regarding independent claim 1, Abjanic discloses:

A method for processing an input document encoded in an extensible extensible markup language ("XML"), said method comprising:
converting said input document encoded in XML to an output document ([0072] re: "XML ... formats" and "transform from a first format to a second format") ... ;
processing said output document ([0073] discussing switching based upon the content of "XML data or data in another format". Therefore either XML or another data format may be parsed [ie., processed] to obtain content data.) ... ;
identifying a target to which the processed output document will be next routed; ([0073], disclosing content based and address based routing) and
determining whether said target is capable of processing documents ([0070]) ... ;
if said target is determined to be capable of processing documents encoded in mXML, transmitting the processed output document encoded in mXML to said target; ([0072], it being implicit that if the discussed communication is to take place the underlying protocol between the communicating computers must either be the same (obviating transformation) or different [necessitating transformation]) and
if said target is determined not to be capable of processing documents encoded in mXML, converting the processed output document encoded in mXML to an output document encoded in XML, and transmitting said output document encoded in XML to said target. ([0072], it being implicit that if the discussed communication is to take place the underlying protocol between the communicating computers must either be the same (obviating transformation) or different [necessitating transformation])

Abjanic, though, does not explicitly disclose:

*... encoded in a machine-oriented extensible markup language ("mXML"), said output document encoded in mXML being capable of being processed more efficiently than said document encoded in XML;
... encoded in mXML;
... and
... encoded in mXML.*

The Office notes that mXML is a derivative of XML for use in document exchanges in an e-Commerce environment (See Applicant's specification [0011]), and particularly for content based routing among network devices (See Applicant's specification [0003]).

Abjanic discloses the use of XML derivatives such as cXML (Commerce XML) ([0072]) and ebXML (Electronic Business XML) ([0072]) for document exchanges in an e-Commerce environment ([0070] re: business transaction information), and particularly for content based routing ([0070] re: routing messages based upon content). Additionally, Abjanic discusses such XML derivatives as WML and ebXML for more efficient communications in wireless and e-Commerce environments at [0071] – [0072].

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the teachings of Abjanic to provide business transaction information in the mXML format, because to do so would have enabled clients and servers to communicate with each other where different data formats are involved (such as the analogous formats cXML and ebXML), as taught by Abjanic in [0072]. Abjanic and Applicant operate in the same field of endeavor, i.e., the transferring of eCommerce messages among computer platforms.

Regarding claim 2, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

Abjanic further discloses:

wherein said identifying comprises parsing the processed output document. ([0073] discussing switching based upon the content of "XML data or data in another format". Therefore either XML or another data format may be parsed [ie., processed] to obtain content data.)

Regarding claim 3, which is dependent upon claim 2, the limitations of claim 2 have been previously addressed.

Abjanic further discloses:

wherein said identifying comprises identifying a host name string for routing of the processed output document. ([0039] and [0040] in context of [0073], especially table below [0039] re: "bookstore.com")

Regarding claim 4, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

Abjanic further discloses:

wherein said determining comprises referencing a datastore, said datastore storing data identifying a plurality of targets and indicating whether each of said plurality of targets is capable of processing documents encoded in mXML. ([0039] and [0040] in context of [0073], especially table below [0039] re: "bookstore.com", "stockquote.com", etc., and noting that a table must be stored in memory [i.e., a datastore.]

Claim 6 is substantially similar to claim 2, and therefore likewise rejected.

Regarding claim 7, which is dependent upon claim 6, the limitations of claim 6 have been previously addressed.

Abjanic further discloses:

wherein:

extracting routing data from said output document. ([0039] and [0040] in context of [0073], especially table below [0039] re: "bookstore.com")

Regarding claim 9, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

Abjanic further discloses:

wherein said processing comprises:

processing said output document for content based routing if said target is determined to be capable of processing documents encoded in mXML. ([0040] and [0041], especially [0041] re: "orders sent to bookstore.com")

Regarding claim 11, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

Abjanic further discloses:

further comprising:

processing the converted output document encoded in XML. ([0036], re; parsing the XML data and verifying that it is well formed)

Regarding claim 12, which is dependent upon claim 11, the limitations of claim 11 have been previously addressed.

Abjanic further discloses:

wherein processing the converted output document encoded in XML comprises transmitting the converted output document encoded in XML to said target. ([0040] and [0041], especially [0041] re: "orders sent to bookstore.com")

Regarding independent claim 14, Abjanic discloses:

A method for processing an input document encoded in a machine-oriented extensible markup language ("mXML"), said method comprising:
determining whether said input document will be next routed to a target which is capable of processing documents ([0070]) ... ;
converting said input document ... to an output document encoded in extensible markup language ("XML") if said target is determined to be not capable of processing documents ([0072], re: transform from a first to a second format) ... ; and
(c) processing said output document ([0073] discussing switching based upon the content of "XML data or data in another format". Therefore either XML or another data format may be parsed [ie., processed] to obtain content data.)

Abjanic, though, does not explicitly disclose:

... encoded mXML, documents encoded in mXML excluding tags that include human language words;
... encoded in mXML ... encoded in mXML; and
... encoded in mXML.

The Office notes that mXML is a derivative of XML for use in document exchanges in an e-Commerce environment (See Applicant's specification [0011]), and particularly for content based routing among network devices (See Applicant's specification [0003]).

Abjanic discloses the use of XML derivatives such as cXML (Commerce XML) ([0072]) and ebXML (Electronic Business XML) ([0072]) for document exchanges in an

e-Commerce environment ([0070] re: business transaction information), and particularly for content based routing ([0070] re: routing messages based upon content). The statement "documents encoded in mXML excluding tags that include human language words" is essentially a product by process modifier. Furthermore, the tags/data/programming constructs one places within a document are merely a matter of obvious design choice. Additionally, the referenced statement is contradicted by Fig. 4C, which does contain "human language words" such as root, element, name, etc.

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the teachings of Abjanic to provide business transaction information in the mXML format, because to do so would have enabled clients and servers to communicate with each other where different data formats are involved (such as the analogous formats cXML and ebXML), as taught by Abjanic in [0072]. Abjanic and Applicant operate in the same field of endeavor, i.e., the transferring of eCommerce messages among computer platforms.

Regarding claim 15, which is dependent upon claim 14, the limitations of claim 14 have been previously addressed.

Abjanic further discloses:

*wherein said determining comprises:
identifying a target to which said input document will be next routed;
([0073], disclosing content based and address based routing) and
determining whether said target is capable of processing
documents encoded in mXML. ([0070])*

Claim 16 is substantially similar to claim 4, and therefore likewise rejected.

Regarding claim 18, which is dependent upon claim 14, the limitations of claim 14 have been previously addressed.

Abjanic further discloses:

further comprising:

processing said input document encoded in mXML. ([0073] discussing switching based upon the content of "XML data or data in another format". Therefore either XML or another data format may be parsed [ie., processed] to obtain content data.)

Regarding claim 19, which is dependent upon claim 18, the limitations of claim 18 have been previously addressed.

Abjanic further discloses:

wherein processing said input document encoded in mXML comprises parsing said input document encoded in mXML. ([0073] discussing switching based upon the content of "XML data or data in another format". Therefore either XML or another data format may be parsed [ie., processed] to obtain content data.)

Regarding claim 20, which is dependent upon claim 14, the limitations of claim 14 have been previously addressed.

Abjanic further discloses:

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wherein:

determining whether said input document will be next routed to a target which is capable of processing documents encoded in mXML comprises transmitting said output documents encoded in XML. ([0040] and [0041], especially [0041] re: "orders sent to bookstore.com" and [0071] - [0072])

Regarding independent claim 21, Abjanic discloses:

A computer program product embodied on one or more computer-readable media, the computer program product adapted for processing an input document encoded in an extensible extensible markup language ("XML") and comprising:

- (a) computer-readable program code configured to converting said input document encoded in XML to an output document ([0072] re: "XML ... formats" and "transform from a first format to a second format") ... ;*
- (b) computer-readable program code configured to processing said output document ([0073] discussing switching based upon the content of "XML data or data in another format". Therefore either XML or another data format may be parsed [ie., processed] to obtain content data.) ... ;*
- (c) computer-readable program code configured to identifying a target to which the processed output document will be next routed; ([0073], disclosing content based and address based routing) and*
- (d) computer-readable program code configured to determining whether said target is capable of processing documents ([0070])*

Abjanic, though, does not explicitly disclose:

- (a) ... encoded in a machine-oriented extensible markup language ("mXML"), said output document encoded in mXML being capable of being processed more efficiently than said document encoded in XML;*
- (b) ... ;*
- (c) ... ; and*
- (d) ... encoded in mXML.*

The Office notes that mXML is a derivative of XML for use in document exchanges in an e-Commerce environment (See Applicant's specification [0011]), and

particularly for content based routing among network devices (See Applicant's specification [0003]).

Abjanic discloses the use of XML derivatives such as cXML (Commerce XML) ([0072]) and ebXML (Electronic Business XML) ([0072]) for document exchanges in an e-Commerce environment ([0070] re: business transaction information), and particularly for content based routing ([0070] re: routing messages based upon content). Additionally, Abjanic discusses such XML derivatives as WML and ebXML for more efficient communications in wireless and e-Commerce environments at [0071] – [0072].

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the teachings of Abjanic to provide business transaction information in the mXML format, because to do so would have enabled clients and servers to communicate with each other where different data formats are involved (such as the analogous formats cXML and ebXML), as taught by Abjanic in [0072]. Abjanic and Applicant operate in the same field of endeavor, i.e., the transferring of eCommerce messages among computer platforms.

Regarding independent claim 24, Abjanic discloses:

A system for processing an input document encoded in an extensible extensible markup language ("XML"), said system comprising:

(a) means for converting said input document encoded in XML to an output document ([0072] re: "XML ... formats" and "transform from a first format to a second format") ... ;

(b) means for processing said output document ([0073] discussing switching based upon the content of "XML data or data in another format". Therefore either XML or another data format may be parsed [ie., processed] to obtain content data.) ... ;

(c) means for identifying a target to which the processed output document will be next routed; ([0073], disclosing content based and address based routing) and

(d) means for determining whether said target is capable of processing documents ([0070])

Abjanic, though, does not explicitly disclose:

(a) ... encoded in a machine-oriented extensible markup language ("mXML"), said output document encoded in mXML being capable of being processed more efficiently than said document encoded in XML;

(b) ... encoded in mXML;

(c) ... and

(d) ... encoded in mXML.

The Office notes that mXML is a derivative of XML for use in document exchanges in an e-Commerce environment (See Applicant's specification [0011]), and particularly for content based routing among network devices (See Applicant's specification [0003]).

Abjanic discloses the use of XML derivatives such as cXML (Commerce XML) ([0072]) and ebXML (Electronic Business XML) ([0072]) for document exchanges in an e-Commerce environment ([0070] re: business transaction information), and particularly for content based routing ([0070] re: routing messages based upon content).

Additionally, Abjanic discusses such XML derivatives as WML and ebXML for more efficient communications in wireless and e-Commerce environments at [0071] – [0072].

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the teachings of Abjanic to provide business transaction information in the mXML format, because to do so would have enabled clients and servers to communicate with each other where different data formats are involved (such

as the analogous formats cXML and ebXML), as taught by Abjanic in [0072]. Abjanic and Applicant operate in the same field of endeavor, i.e., the transferring of eCommerce messages among computer platforms.

Regarding independent claim 27, Abjanic discloses:

*A method for processing an input document comprising:
determining whether said input document will be next routed to a
target which is capable of processing documents ([0070]) ... ; and
converting said input document to an output document encoded in
an extensible markup language ("XML") if said input document is ... and
said target is not capable of processing documents ([0072], re: transform
from a first to a second format)*

Abjanic, though, does not explicitly disclose:

*(a) ... encoded in a machine-oriented extensible markup language
("mXML"), said output document encoded in mXML being capable of
being processed more efficiently than said document encoded in XML;
and
(b) ... encoded in mXML ... encoded in mXML.*

The Office notes that mXML is a derivative of XML for use in document exchanges in an e-Commerce environment (See Applicant's specification [0011]), and particularly for content based routing among network devices (See Applicant's specification [0003]).

Abjanic discloses the use of XML derivatives such as cXML (Commerce XML) ([0072]) and ebXML (Electronic Business XML) ([0072]) for document exchanges in an e-Commerce environment ([0070] re: business transaction information), and particularly for content based routing ([0070] re: routing messages based upon content).

Additionally, Abjanic discusses such XML derivatives as WML and ebXML for more efficient communications in wireless and e-Commerce environments at [0071] – [0072].

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the teachings of Abjanic to provide business transaction information in the mXML format, because to do so would have enabled clients and servers to communicate with each other where different data formats are involved (such as the analogous formats cXML and ebXML), as taught by Abjanic in [0072]. Abjanic and Applicant operate in the same field of endeavor, i.e., the transferring of eCommerce messages among computer platforms.

Regarding claim 28, which is dependent upon claim 27, the limitations of claim 27 have been previously addressed.

Abjanic further discloses:

further comprising:

converting an original document encoded in XML to an input document encoded in mXML and wherein converting an original document encoded in XML to an input document encoded in mXML occurs prior to determining whether said input document will be next routed to a target which is capable of processing documents encoded in a machine oriented extensible markup language ("mXML"), said input document encoded in mXML being capable of being processed more efficiently than said input document. (Claim 28 is substantially similar to claim 10. Therefore see [0072], re: transform from a first to a second format, it being merely a matter of obvious design choice as to when one performs such a transformation. The Office notes that this claim clearly mitigates against operational efficiency. Unless all targets are mXML-capable, then unnecessary conversions are being performed.)

Regarding claim 29, which is dependent upon claim 28, the limitations of claim 28 have been previously addressed.

Abjanic further discloses:

wherein said determining comprises:
identifying a target to which said input document will be next routed;
([0073], disclosing content based and address based routing) *and*
determining whether said target is capable of processing
documents encoded in mXML. ([0070])

Regarding claim 30, which is dependent upon claim 29, the limitations of claim 29 have been previously addressed.

Abjanic further discloses:

wherein said identifying comprises parsing said input document.
([0073] discussing switching based upon the content of "XML data or data in another format". Therefore either XML or another data format may be parsed [i.e., processed] to obtain content data.)

Regarding claim 31, which is dependent upon claim 30, the limitations of claim 30 have been previously addressed.

Abjanic further discloses:

wherein said determining comprises referencing a datastore, said datastore storing data identifying a plurality of targets and indicating whether each of said plurality of targets is capable of processing documents encoded in mXML. ([0039] and [0040] in context of [0073], especially table below [0039] re; "bookstore.com", "stockquote.com", etc., and noting that a table must be stored in memory [i.e., a datastore.]

Regarding claim 33, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

Abjanic further discloses:

wherein said input document encoded in XML includes tags that include human language words, and wherein said output document encoded in mXML does not include any tags that include human language words. ([0071] – [0072], the Office noting that the statement “documents encoded in mXML excluding tags that include human language words” is essentially a product by process modifier. Furthermore, the tags/data/programming constructs one places within a document are merely a matter of obvious design choice. Additionally, the referenced statement is contradicted by Fig. 4C, which does contain “human language words” such as root, element, name, etc.)

15. **Claims 5, 13, 17, 22-23 and 25-26 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Abjanic et al (US Patent Application Publication No. 2003/0069975 filed Dec. 22, 2000 and relying upon CIP application filed 5/8/00 [09/566,800], which in turn relies upon CIP filed 4/13/00 [09/549,041], and further relying upon CIP application filed 5/1/00 [09/562,104], said Publication hereafter referred to as “Abjanic”) in view of Elliott Rusty Harold, XML: Extensible Markup Language, IDG Books Worldwide, Inc., Foster City, CA, © 1998, pp. 29-33, 69-70, 104-111 and 121-128, hereafter referred to as “Harold”) and Robert LaFore et al., Data Structures & Algorithms in Java, Waite Group Press, Corte Madera, CA, © 1998, pp. 182-190, 293-299 and 328-339, hereafter referred to as “LaFore”).

Regarding claim 5, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

However, Abjanic does not explicitly disclose:

wherein converting comprises:
 creating a document tree representation of the input document;
 obtaining a node count representing a count of nodes in the
 document tree representation;
 writing the node count to an mXML buffer;
 traversing each node in the document tree representation and
 generating a corresponding node specification in the mXML buffer, further
 comprising the steps of:
 generating a node name;
 generating an attribute list specifying zero or more (attribute
 name, attribute value) pair references for attributes of the node;
 generating a child list specifying index values of zero or
 more nodes which are children of the node; and
 generating a node value specification, which is empty if the
 node has no value;
 generating a data buffer containing attribute names and attribute
 values referenced from the attribute lists and node values referenced from
 the node value specifications; and
 appending the data buffer to the mXML buffer to form the output
 document.

Harold, though, discloses:

wherein converting comprises:
 creating a document tree representation of the input document; (pp.
 69-70, disclosing that XML [and XML derivative documents] are trees,
 especially last paragraph on p. 69 and first on p. 70 and Fig. 3.1.)
 ... ;
 ... ;
 traversing each node in the document tree representation and
 generating a corresponding node specification in the mXML buffer (pp. 69-
 70, especially first paragraph regarding programs that read XML
 documents on p. 70 and Fig. 3.1.), further comprising the steps of:
 generating a node name; (p. 121, re:
 getAttribute(AttributeName))

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generating an attribute list specifying zero or more (attribute name, attribute value) pair references for attributes of the node; (p. 104 re; Select() and p. 121, re: getAttribute(AttributeName))
generating a child list specifying index values of zero or more nodes which are children of the node; (p. 104 re; Select() and p. 121, re: getAttribute(AttributeName)) and
generating a node value specification, which is empty if the node has no value; (p. 121, re: getAttribute(AttributeName))
... ; and
... . ()

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Harold for the benefit of Abjanic, because to do so would have allowed a programmer to process documents, such as XML, which have elements represented as linked data structures such as nodes, as taught by Harold in the first two sentences of p. 121. These references were all applicable to the same field of endeavor, i.e., object oriented programming.

Further in regards to claim 5, Abjanic does not explicitly disclose:

wherein converting comprises:
creating a document tree representation of the input document;
obtaining a node count representing a count of nodes in the document tree representation;
writing the node count to an mXML buffer;
traversing each node in the document tree representation and
generating a corresponding node specification in the mXML buffer, further comprising the steps of:
generating a node name;
generating an attribute list specifying zero or more (attribute name, attribute value) pair references for attributes of the node;
generating a child list specifying index values of zero or more nodes which are children of the node; and
generating a node value specification, which is empty if the node has no value;

generating a data buffer containing attribute names and attribute values referenced from the attribute lists and node values referenced from the node value specifications; and
appending the data buffer to the mXML buffer to form the output document.

LaFore, though, discloses:

wherein converting comprises:

*... ;
obtaining a node count representing a count of nodes in the document tree representation; (p. 330 Fig. 8.21 shows an array whose size is equal to the node count of a tree)*

writing the node count to an mXML buffer; (p. 333, Assignment of values to a variable [buffer] name is well known in the art. See p. 333 code listing disclosing the insert() member where the variable/buffer iData is assigned the integer value id.)

... :

... ;

... ;

... ; and

... ;

generating a data buffer containing attribute names and attribute values referenced from the attribute lists and node values referenced from the node value specifications; (Creating a buffer is well known in the art. For example, see p. 187 code disclosing the DoublyLinkedList() constructor method) and

appending the data buffer to the mXML buffer to form the output document. (Appending to a databuffer is well known in the art. For example, see the p. 187 code listing disclosing the insertLast() method)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of LaFore for the benefit of Abjanic and Harold, because to do so would have allowed a programmer to process linked data structures, as taught by LaFore in the code listings of pp. 333-339 (regarding tree processing) and pp. 187-190 (regarding linked list processing). These references were all applicable to the same field of endeavor, i.e., object oriented programming.

Abjanic, Harold and LaFore were all applicable to the same field of endeavor, i.e., object oriented programming.

Claims 13, 17, 22-23 and 25-26 are substantially similar to claim 5, and therefore likewise rejected.

16. **Claim 32 is rejected under 35 U.S.C. 103(a)** as being unpatentable over Abjanic et al (US Patent Application Publication No. 2003/0069975 filed Dec. 22, 2000 and relying upon CIP application filed 5/8/00 [09/566,800], which in turn relies upon CIP filed 4/13/00 [09/549,041], and further relying upon CIP application filed 5/1/00 [09/562,104], said Publication hereafter referred to as "Abjanic") in view of Jamie Jaworski, JAVA 1.1 Developer's Guide, 2nd Edition, Sams.net Publishing, Indianapolis, IN, © 1997, pp. 3-10, 75-77, 81-82 and 933-941, hereafter referred to as "Jaworski").

Regarding claim 32, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

However, Abjanic does not explicitly disclose:

wherein said output document is encoded in an array notation.

Jaworski, though, discloses:

wherein said output document is encoded in an array notation. (pp. 81 and 934 discuss the well known concepts of array use and object serialization)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Jaworski for the benefit of Abjanic, because to do so would have allowed a programmer to design highly portable code, as taught by Jaworski on p. 6. These references were all applicable to the same field of endeavor, i.e., object oriented programming.

Response to Arguments

17. Applicant's arguments filed 1/7/2005 have been fully considered but they are not persuasive.

It is respectfully noted that Applicant's amendment to the claims significantly changes the scope of the claimed invention as a whole. As such, Applicant's arguments (pages 19-24 of the amendment) concerning FAOM rejections of claims 1-31 under 35 USC 103(a) have been rendered moot.

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patents

Helgelson et al	6,643,652
Shadmon et al	6,804,677

19. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert M Stevens whose telephone number is (571) 272-4102. The examiner can normally be reached on M-F 6:00 - 2:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H. Feild can be reached on (571) 272-4090. The current fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Additionally, the main number for Technology Center 2100 is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert M. Stevens
Reg. No. 47,972
Art Unit 2176
Date: May 25, 2005

rms


JOSEPH FEILD
SUPERVISORY PATENT EXAMINER